

We claim:

1. A hydrophilic article comprising:
a thermoplastic polymer layer having a first surface and a second surface having an
5 adhesive layer bonded to said second surface, said adhesive layer comprising a surfactant
that migrates to said first surface of said polymeric layer.
2. The hydrophilic article of claim 1 wherein said polymeric layer comprises films,
porous membranes, microporous membranes, and fibrous polymer layers.
- 10 3. The hydrophilic article of claim 1 wherein said surfactant is selected from
nonionic, anionic, and amphoteric surfactants or mixtures thereof.
4. The hydrophilic article of claim 3 wherein said surfactant is a fluorochemical
15 nonionic surfactant.
5. The hydrophilic article of claim 4 wherein said surfactant is of the formula
(R_f-Q)_n-Z wherein
R_f represents a partially- or fully- fluorinated aliphatic group,
20 Q is an organic divalent or multivalent linking group or a covalent bond,
Z is a hydrophilic poly(oxyalkylene) group and n is 1 to 6.
6. The hydrophilic article of claim 5 wherein Z comprises a poly(oxyalkylene) of the
formula (OR')_x wherein R' is an alkylene group of 2 to 4 carbon atoms, and x is a number
25 from 4 to 25.
7. The hydrophilic article of claim 5 wherein said poly(oxyalkylene) group is
terminated by a hydroxyl, an alkyl, alkaryl ether, or fluoroalkyl ether.
- 30 8. The hydrophilic article of claim 3 wherein said nonionic surfactant is of the
formula:
R_h¹-Y¹-W-Y²-R_h², wherein:
W represents a polyoxyalkylene group;

Y¹ and Y² independently represent an oxygen or sulfur atom or a group of the formula -CO-, -COO-, -NH-, -CONH-, or -N(R)-, where R is an alkyl group or an aryl group; R_h¹ represents an alkyl or an aryl group, or a combination thereof, and R_h² represents a hydrogen atom or is an alkyl or an aryl group, or a combination thereof.

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9. The hydrophilic article of claim 8 wherein said nonionic surfactant wherein said poly(oxyalkylene) group contains from 4 to 25 oxyalkylene units.

10. The hydrophilic article of claim 1 wherein said surfactant is present in an amount
10 sufficient to render said thermoplastic polymer layer hydrophilic.

11. The hydrophilic article of claim 10 wherein said adhesive layer comprises at least 3 wt.% of said surfactant.

12. The hydrophilic article of claim 10 wherein said adhesive layer comprises 5 to 40
15 wt.% of said surfactant.

13. The hydrophilic article of claim 1 wherein said polymeric layer is selected from polyesters, polyurethanes, polyamides and poly(alpha)olefins
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14. The hydrophilic article of claim 1 wherein said polymeric layer is selected from homo-, co- and terpolymers of aliphatic mono- alpha olefins.

15. The hydrophilic article of claim 1 wherein said polymeric layer is selected from
25 homo-, co- and terpolymers of ethylene and propylene.

16. The hydrophilic article of claim 1, wherein said adhesive layer is a pressure sensitive adhesive layer.

17. The hydrophilic article of claim 1 further comprising a release liner.
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18. The hydrophilic article of claim 1, wherein said thermoplastic polymer layer is patterned.
19. The hydrophilic article of claim 1 printed on at least a portion of the hydrophilic surface with an image pattern of ink.
20. The hydrophilic article of claim 19 wherein said ink is an aqueous ink.
21. The hydrophilic article of claim 1 wherein said thermoplastic polymer layer is initially hydrophobic
22. A liquid transport article comprising the hydrophilic article of claim 1, wherein the thermoplastic polymer layer comprises a microstructure-bearing surface with a plurality of channels that facilitate the directional flow of a liquid disposed thereon.
23. A method of preparing a hydrophilic article according to claim 1 comprising coating a thermoplastic polymer layer with an adhesive layer, said adhesive layer comprising a surfactant that migrates to said first surface of said polymeric layer.
24. The method of claim 23 wherein said thermoplastic polymer layer comprises a film, a membrane, or a fibrous polymer layer.
25. The method of claim 23 wherein said surfactant is present in an amount sufficient to render said thermoplastic polymer layer hydrophilic.
26. The method of claim 23 wherein said surfactant is selected from nonionic, anionic, and amphoteric surfactants.
27. The method of claim 26 wherein said surfactant is a fluorochemical nonionic surfactant.

28. The method of claim 23 wherein said surfactant is present in an amount sufficient to render said thermoplastic polymer layer hydrophilic.

29. The method of claim 28 wherein said adhesive layer comprises at least 3 wt.% of said surfactant.

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